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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,816	02/19/2002	Joseph Raymond Diehl	8868	7132

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THE PROCTER & GAMBLE COMPANY
INTELLECTUAL PROPERTY DIVISION
WINTON HILL BUSINESS CENTER - BOX 161
6110 CENTER HILL AVENUE
CINCINNATI, OH 45224

EXAMINER

ANDERSON, CATHARINE L

ART UNIT PAPER NUMBER

3761

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,816

Applicant(s)

DIEHL ET AL.

Examiner

C. Lynne Anderson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-30 and 32-40 is/are rejected.
- 7) ☒ Claim(s) 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Response to Arguments***

Applicant's arguments filed 24 July 2006 have been fully considered but they are not persuasive.

With respect to the independent claims 21, 37, and 40, it is noted that Neading is modified by the teaching of Hsu to measure ionic strength to determine specific gravity, and further modified by the teaching of Flam to provide an alphanumeric character in addition to the indicia.

Neading describes in column 3, line 48, to column 4, line 12, a color change material (i.e. a chemical indicating composition) which changes color to indicate specific gravity, but does not provide further detail about a color change material capable of indicating specific gravity. Hsu discloses a color change material which changes color to indicate the ionic strength, and further discloses that the ionic strength correlates to the specific gravity (and, inherently, the dehydration level). Hsu is therefore relied upon to fill in the gaps left by Neading with respect to the color change material that is capable of indicating specific gravity. It is noted that the indicator of Hsu is not provided to replace the "on-off wetness indicator" of Neading, but rather to replace the color change material capable of measuring specific gravity disclosed by Neading in an alternate embodiment.

Neading, as modified by Hsu to include a color change material that indicated ionic strength, still fails to disclose alphanumeric characters. Flam is therefore relied upon for teaching an advantage of including an alphanumeric

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character in addition to a color change indicator. Only the general teaching of providing an alphanumeric character is relied upon, and the specific indicator of Flam is not substituted for the indicator of Neading. The teaching of an alphanumeric character to further clarify the results of a color change indicator is generally applicable and to specific only to the indicator of Flam. Therefore, one of ordinary skill in the art would find it obvious to modify the article of Neading to provide alphanumeric characters based on the teaching of Flam.

With respect to claims 24, 25, 32, 33, and 39, it is noted that the chemical indicating composition of Hsu provides multiple colors for multiple levels of ionic strength, as shown in column 7, Example 1. and therefore provides a second visible signal as claimed. Flam shows multiple alphanumeric characters in Figure 1 to correspond to the multiple color changes.

With respect to claim 27, Hsu discloses in column 6, line 48, dibromothymolsulfonephthalein, which is bromothymol blue.

With respect to claims 28-30, Flam shows in Figure 1 the alphanumeric characters juxtaposed next to colored zones. Since Flam is relied upon for the teaching of use of alphanumeric characters, and the juxtaposition of the characters to the color change zones is a part of the teachings, the modification of Neading to provide alphanumeric characters will include juxtaposition of the characters next to the color change zones.

With respect to claims 35 and 36, Neading shows in Figure 3, a layer of cellulose acetate (14B) abutting the chemical indicating composition (14A), and therefore the side of the layer 14A abutted by the layer 14B is covered by

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cellulose acetate. The instant claims do not require the entire chemical indicating composition to be covered by the layer of cellulose acetate, and therefore even only a portion of the chemical indicating composition is covered by the cellulose acetate layer, the limitations of the claims are fulfilled.

With respect to claim 23, Neading discloses a color change indicator (i.e. a chemical indicating composition) that is exposed so that it may be viewed from the exterior of the article. The color change indicator is intended to absorb urine so that it may indicate a characteristic of the urine, as disclosed in column 3, line 48, to column 4, line 12. Having a portion of the article that is intended to absorb urine exposed provides a possibility for leakage from the article. Therefore, Lee is relied upon to provide a cover that is both liquid impervious and still allows the indicator to be viewed from the exterior of the article.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-22, 24-30, and 32-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neading et al. (6,515,194) in view of Hsu (5,922,283) and further in view of Flam (5,181,905).

With respect to claims 21, 37, and 40, Neading discloses a wearable article, as shown in figure 2, comprising a topsheet 18 and a dehydration

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indicator 14A, 16. The dehydration indicator 14A, 16 exhibits a visible response elicited by the specific gravity, as disclosed in column 4, lines 1-8. The wearable article is an absorbent article, as shown in figure 2, comprising an outer cover 22, a fluid permeable topsheet 18, and an absorbent structure 20. The level of specific gravity inherently indicates the level of dehydration.

Neading remains silent as to the method of measuring specific gravity, and does not explicitly disclose the measuring of the urine ionic strength in order to determine the specific gravity of the urine. Hsu teaches the use of test strips to determine the specific gravity of urine by measuring the urine ionic strength. The test strips comprise an absorbent material impregnated with a reagent that exhibits a color change upon contact with urine to indicate the ionic strength and subsequently the specific gravity of the urine, as disclosed in column 8, lines 3-12. Neading discloses the need for a material that undergoes a color change elicited by specific gravity, as described in column 4, lines 1-4, by contacting the material with absorbed urine, thus providing a motivation to measure any parameter that would allow the determination of specific gravity from a color change. It would therefore be obvious to one of ordinary skill in the art at the time of invention to provide the test strip material of Hsu as the strip of material disclosed by Neading, to provide an indicator designed for absorption of urine that undergoes a color change elicited by specific gravity.

Neading, as modified by Hsu, fails to disclose the dehydration indicator comprising an alphanumeric character indicative of a level of dehydration. Neading and Hsu disclose a color change indicative of a level of dehydration.

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Flan teaches the use of letters and numbers to indicate a physical property of a liquid absorbed by an absorbent article, as shown in figure 3. The use of letters and numbers as indicia allow the user to more easily recognize a change in the property and administer appropriate treatment, as disclosed in column 4, lines 56-68. It would therefore be obvious to one of ordinary skill in the art at the time of invention to provide the indicator of Neading, as modified by Hsu, with alphanumeric characters, as taught by Flan, to allow the user to more easily recognize a change in the property and administer appropriate treatment.

With respect to claims 22 and 38, the visible signal is triggered by the ionic strength exceeding a predetermined threshold, and therefore is visible when the ionic strength exceeds the threshold.

With respect to claims 24-25, 32-33, and 39, the visible signal for a second level of ionic strength is represented by a different color.

With respect to claim 26, Hsu discloses in column 3, lines 57, the use of aminotris (methylenephosphonic acid), which is synonymous with nitrilotris (methylenephosphonic acid).

With respect to claim 27, Hsu discloses in column 6, line 48, the use of bromothymol blue.

With respect to claims 28-30, Flam discloses alphanumeric characters juxtaposed next to color change zones, as shown in figure 1.

With respect to claim 34, Neading discloses in column 3, lines 48-65, the dehydration indicator is fixed to the topsheet.

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With respect to claims 35-36, Neading shows in figure 1 a fluid transport means 14B comprising cellulose acetate, as disclosed in column 3, lines 31-47.

Claims 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neading et al. (6,515,194) in view of Hsu (5,922,283) and Flam (5,181,905), as applied to claim 21 above, and further in view of Lee (5,947,943).

Neading, in combination with Hsu and Flam, discloses all aspects of the claimed invention but remains silent with respect to the outer cover 22. Neading discloses in column 4, lines 49 and 67, that the indicator comprised in the article is exposed.

Lee discloses an absorbent article having an indicator located therein, as described in column 3, lines 12-15. The outer cover 16 of the article is translucent so the indicator may be easily viewed without removing the article, as disclosed in column 3, lines 46-55. The outer cover 16 provides a barrier to moisture, as disclosed in column 3, line 6, which prevents liquids from leaking from the article and protects the indicator from exterior liquids.

It would therefore be obvious to one of ordinary skill in the art at the time of invention to make the outer cover of Neading as modified by the teaching of Hsu, translucent, as taught by Lee, so the indicator is protected by the cover but still easily viewed without removal of the article.

Allowable Subject Matter

Claim 31 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to disclose a word descriptive of the level of dehydration. The prior art of record discloses only a change in color to indicate the level of ionic strength, which is then correlated to the level of dehydration. The prior art of record does not disclose or fairly suggest providing a word descriptive of the level of dehydration on the diaper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Lynne Anderson whose telephone number is (571) 272-4932. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tanya Zalukaeva can be reached on (571) 272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CWA

cla

October 13, 2006

K. M. Reiche
KARIN REICHE
PATENT EXAMINER